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Integration of the Super Nova Early Warning System with the NOvA Trigger

The NOvA experiment, with a baseline of 810 km, samples Fermilab's upgraded NuMI beam with a Near Detector on-site and a Far Detector (FD) at Ash River, MN, to observe oscillations of muon neutrinos. The 344,064 liquid scintillator-filled cells of the 14 kton FD provide high granularity of a large detector mass and enable us to also study non-accelerator based neutrinos with our Data Driven Trigger framework. This talk/poster will focus on the real time integration of the SNEWS with the NOvA Trigger where we have set up an XML-RPC based messaging system to inject the SNEWS signal directly into our trigger. This presents a departure from the E-Mail based notification mechanism used by SNEWS in the past and allows NOvA more control over propagation and transmission timing. Message propagation time studies as well as DAQ upgrades to accommodate larger data buffers and improved data readout are discussed.

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